

**Proposed Grant Awards
FY2006 Water Quality Improvement Fund (WQIF)
SOUTHERN RIVERS WATERSHEDS**

Introduction

These proposed grant awards are intended to reduce pollution through partnerships with local governments, community groups and others. The grants focus on implementing Virginia's Chesapeake Bay Tributary Strategies as well as improving waters throughout Virginia that do not meet water quality standards (TMDL waters). Grants are awarded for projects within the Chesapeake Bay watershed as well as watersheds in Virginia that drain outside the Chesapeake Bay watershed, the "Southern Rivers."

These awards support two Water Quality Improvement Fund programs: Cooperative Nonpoint Source Pollution Programs with Local Governments and Strategic Nonpoint Source Water Quality Initiatives. The Water Quality Improvement Act requires that a list of projects proposed for funding be made available for public review and comment for at least 30 days prior to executing final grant agreements. Comments or questions should be submitted to Rick Hill at rick.hill@dcr.virginia.gov.

Cooperative Nonpoint Source Programs With Local Governments

- **Lee County Board of Supervisors.** *Powell River Watershed Wastewater Reduction Project.* This project aims to reduce sewage going directly into streams ("straight pipes") within the Powell River watershed and create awareness resulting in the future elimination of straight pipes. WQIF funding will support the replacement of 71 straight pipe systems, 60 in Ewing and eleven in Fawn Branch, through the combined approach of a decentralized system in the close proximity residences and on-site applications in the more distant locations. This project addresses the fecal coliform TMDL impairments on the Powell River and Straight Creek. \$200,000 WQIF / \$200,000 Match.
- **Roanoke County – Department of Parks, Recreation & Tourism.** *Mudlick Creek Urban Stream Restoration at Garst Mill Park.* Over the long-term streambank erosion along a 3,000-foot section of Mudlick Creek will be reduced within the heavily visited Garst Mill Park. The instream habitat structure will be restored, the riparian buffer will be augmented with native vegetation plantings and, as practical, the equilibrium to the stream channel geometry will be restored. To the extent possible, stream protection and stabilization techniques will seek to replicate natural stream conditions; however, it is likely that a combination of techniques will be necessary in the final design. WQIF funding will be used toward the restoration of the 250-foot section of stream in Reach 3 resulting in an estimated 180 - 216 tons of sediment reduced each year. The sediment reduction will address the benthic TMDL impairment to the Roanoke River. \$148,000 WQIF / \$148,000 Match.

- **Town of Cedar Bluff.** *Cedar Bluff Stormwater Assessment & Bio-Retention Retrofit Project.* The Town of Cedar Bluff located in Tazewell County will install four biofiltration practices including a rain garden, two infiltration trenches, and a vegetated buffer to reduce stormwater impacts in Indian Creek, Middle Creek, and the Clinch River. The constructed BMPs will have interpretive signage and will be used as demonstration sites to educate the community and the region about low impact development. Through this project, the Town will also address neighborhood ordinances to incorporate low impact development (LID) principles in directing future growth in a smarter way. This project benefits benthic TMDL impairments to Indian Creek and Middle Creek. \$52,000 WQIF / \$56,860 Match.
- **Town of Tazewell.** *Upper Clinch River Stormwater Management Project.* A series of six major engineered rain gardens will be installed along with a series of forty (40) gabions as retrofits to control stormwater along the Clinch River and its tributaries. The areas identified for the BMPs pre-date current regulatory programs and are significant contributors of NPS pollutants. Estimated annual NPS pollution load reduction from the six acres of treatment is 4734 lbs sediment, 7 lbs phosphorus, and 16 lbs nitrogen. The reduced sediment loads will benefit the benthic TMDL impairment to the Clinch River. \$200,000 WQIF / \$252,000 Match.
- **Wise County.** *Countywide Sewage Management Planning and Public Outreach.* A countywide wastewater management plan will be developed to accompany new ordinances, a countywide outreach and education program, and a decentralized wastewater treatment system constructed for the Lower Exeter community. This system will help to eliminate bacterial inputs from the untreated sewage of 13 residences. This project will contribute toward addressing fecal coliform TMDL impairments to the Powell River, South Fork Powell River, Guest River, Callahan Creek and Butcher Fork. \$160,000 WQIF / \$160,000 Match.

Strategic Nonpoint Source Water Quality Initiatives

- **Big Sandy River Basin Coalition.** *Big Sandy Basin Coalition Restoration Project.* Nonpoint source pollution reductions will be achieved in the restoration of 500 linear feet of streambank and the reclamation of two abandoned mines totaling four acres. Project implementation initiatives will take place in Buchanan and Dickenson counties. Mining reclamation activities including adding topsoil, grading, and revegetation will be performed on two-acres at the Bull Creek site, a two-acre segment at Starr Branch, and at a series of abandoned tippie sites. The mine reclamation projects will help to address benthic TMDL impairments associated with mining activities to Russell Prater Creek and Bull Creek. Estimated NPS reductions include 250 tons of sediment from the streambank restoration, and 15,000 pounds of sediment annually from the mine sites. \$70,000 WQIF / \$70,000 Match.

- **Big Sandy SWCD. *Knox Creek Restoration Project.*** Water quality will be improved following stabilization of 1,500 feet of streambank, reclamation of four acres abandoned mine lands, ten septic tank repairs and installation or elimination of straight piping, and ten septic tank pump outs. Estimated annual NPS reductions include 60,000 lbs of sediment from the mining sites and 107.6 lbs nitrogen and 26.9 lbs phosphorus from the septic tank repairs and installation. This project will help to address the benthic TMDL impairments associated with mining and NPS pollution loads to Knox Creek and Paw Paw Creek. All targeted NPS reduction activities are in Buchanan County. \$95,000 WQIF / \$95,000 Match.
- **Department of Mines, Minerals, & Energy. *Arno Sedimentation Maintenance Project & Craborchard Branch Out slopes Project.*** Erosion of an abandoned coal waste pile at the Arno site in Wise County will be eliminated to address the benthic TMDL impairment associated with mining and NPS pollution contributors to Callahan Creek. The gob pile will be removed to natural ground and the channel will be reestablished in its original location. Natural stream restoration techniques will be used on the steep channel, where practical. Riparian trees and shrubs will be planted along the restored channel. The barren and eroding out slopes of the Craborchard Branch past coal mining site in Lee County will be reclaimed and vegetation will be established. The Craborchard Branch construction project is located in headwater tributaries and will help to address the benthic TMDL on the North Fork Powell River. The mine reclamation sites are not located on state property. \$60,000 WQIF / \$173,500 Match.
- **Department of Mines, Minerals, & Energy. *Norton Gully Maintenance Project.*** A drainage problem will be corrected to prevent sediment and riprap from being deposited in the Powell River at the confluence of a steep channel in Wise County. The existing riprap will be reworked to create a defined channel, barriers will be installed to prevent displacement of channel material, disturbed areas will be re-vegetated, and sediment will be removed from the channel confluence with the Powell River. The sediment bar to be removed is estimated at 500 feet in length by 10 feet wide and 3 feet deep. Additional estimated reduction of sediment deposition to the Powell River from the reclamation of this site is 3,000 – 5,000 cubic yards. This project will help to address the benthic TMDL impairment to the Powell River. This site is not on state property. \$80,000 WQIF / \$80,000 Match.
- **Lonesome Pine Soil and Water Conservation District. *Guest River Restoration Project.*** The SWCD will address benthic TMDL impairments associated with mining and fecal coliform TMDL impairments to the Guest River with the reclamation of two abandoned mine land sites and completion of ten septic tank repairs and installation or elimination of straight piping. The Monkey Hill Out slopes site reclamation will consist of planting trees on the site. Reclamation of the Guest River Abandoned Tipple site, located directly adjacent to the Guest River, will consist of removing all metal or wooden structures, grading to the original contour, covering in topsoil, mulching and revegetating. The targeted NPS implementation initiatives are located in Wise County. \$100,000 WQIF / \$104,500 Match.

- New River Highlands Resource Conservation & Development Council.** *New River Streambank Stabilization Project.* A series of sixteen streambank and channel stabilization projects will be constructed on private property to reduce sediment pollution and to address benthic TMDL impairments in the New River watershed. Based on landowner contacts with the RC&D, potential stream restoration sites are identified in the counties of Carroll, Bland, Wythe, Grayson, and Pulaski. Final site options will be ranked based on landowner participation, total sediment reduced, type of BMPs to be used, cost, and location within cold water trout streams. The project will focus on BMPs such as stream barbs or deflectors, streambank toe project, J hooks, and vegetative controls such as cedar tree revetments, bio logs, sloping, sharing and establishment of vegetation. Estimated annual reductions of 1,120 tons of sediment will be eliminated from entering the New River and its tributaries. This project will contribute toward addressing benthic TMDL impairments to Back Creek, Bluestone River, Cripple Creek, Chestnut Creek, and the New River. \$100,000 WQIF / \$147,008 Match.
- Upper Tennessee River Roundtable.** *Southwest Virginia Growth Readiness Initiative.* Seven low impact development demonstration projects on new sites or retrofits to existing facilities will be constructed. The LID BMP sites will be located in Wise, Lee, Washington, and Smyth Counties. Estimated annual NPS reductions are 4,734 lbs sediment, 7 lbs phosphorus, and 16 lbs nitrogen. These demonstration project sites will benefit benthic TMDL impairments to the South Fork Holston River, Powell River, and Guest River. \$90,000 WQIF / \$90,000 Match.
- Virginia Polytechnic Institute and State University – Biological Systems Engineering.** *Reducing Urban Stormwater Impacts within the Stroubles Creek Watershed.* Several implementation activities will be constructed to reduce stormwater runoff and streambank erosion and to showcase BMPs that can be used to address the benthic TMDL impairment to Stroubles Creek. Two innovative infiltration BMPs will be constructed in the watershed and a riparian buffer will be planted along a tributary to Stroubles Creek. The infiltration BMPs will use structural soils and will be assessed for flow rate and nutrient reductions to develop and improve pollutant reduction estimates and design guidance. The project will be featured in Virginia Tech courses, workshops, conferences, websites, and watershed tours. Approximately 1220 lbs of sediment, 4 lbs of phosphorus, and 33 lb of nitrogen loading will be reduced annually. \$85,000 WQIF / \$85,000 Match.
- Western Virginia Land Trust.** *Upper Roanoke River and Little River Riparian Protection Partnership.* Lands not eligible for CREP funding will be targeted for a riparian easement purchase program. Over 66 acres of riparian buffers will be permanently preserved. The project area includes the headwaters of the Roanoke River and a major tributary to the New River, the Little River. Riparian buffer protection opportunities will be targeted to TMDL impaired streams in the counties of Bedford, Botetourt, Floyd, Franklin, Montgomery, and Roanoke. The riparian buffer

estimates of 11 miles of streambank with 50-foot buffers, or almost 16 miles of streambank with the minimum 35-foot buffer will be protected through this program. Landowners will be paid a per acre incentive for the permanent riparian easements that require forested buffers, exclude livestock, and prohibit cultivation or other soil disturbing activities. The WVLT will work in partnership with the Peaks of Otter & Blue Ridge SWCDs, who will co-hold the riparian easements with WVLT and help to promote the program. \$100,000 WQIA / \$100,000 Match.